# Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

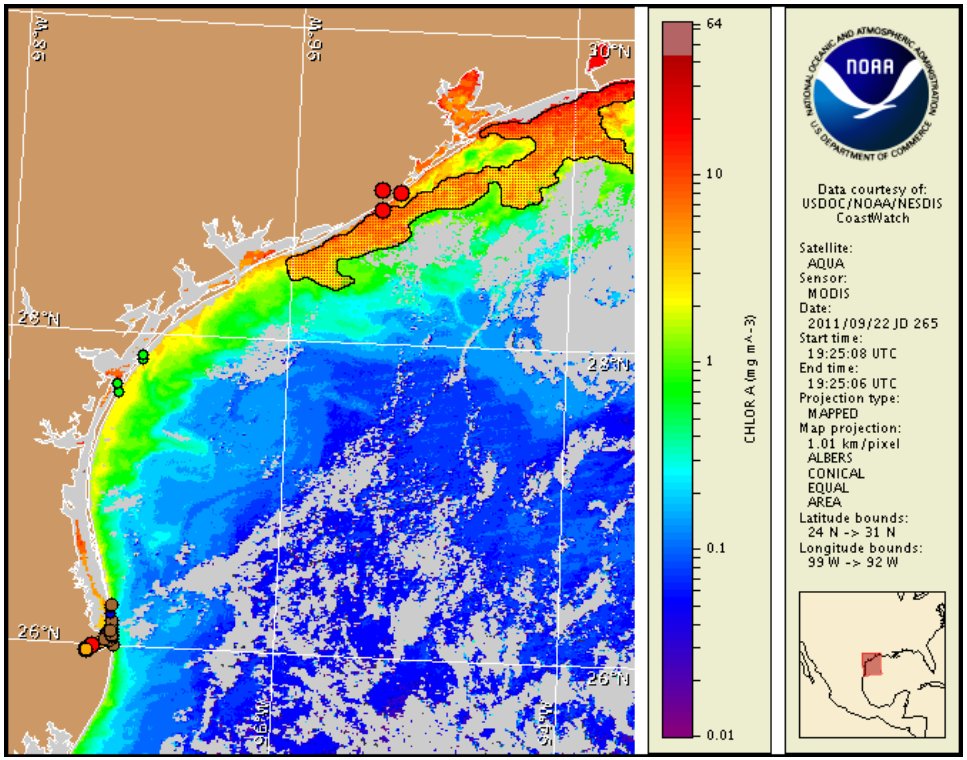
Friday, 23 September 2011

NOAA Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, September 22, 2011




Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from September 13 to 22 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive: http://tidesandcurrents.noaa.gov/hab/bulletins.html

## Conditions Report

A harmful algal bloom has been identified along the Texas coast in the San Luis Pass area and also continues to be present along the Texas coast in the South Padre Island and Brazos Island State Park regions, within the Brownsville Ship Channel area, and within the lower Laguna Madre. Patchy high impacts are possible in the coastal Freeport region today, with patchy low impacts possible tonight through Sunday. Patchy high impacts are possible within the Brownsville Ship Channel area and patchy moderate impacts are possible within the lower Laguna Madre region and along the coastal South Padre Island and Brazos Island State Park regions today through Sunday. No impacts are expected elsewhere alongshore Texas today through Sunday, September 25. Reports of respiratory irritation and dead fish have been received from the San Luis Pass to Brazos River regions, lower Laguna Madre, and southern bay side of South Padre Island. Dead fish have also been reported from the Boca Chica region.

## Analysis

A harmful algal bloom has been identified from San Luis Pass to the gulf side of the Brazos River and also continues to be present along the Texas coast in the South Padre Island and Brazos Island State Park regions, within the Brownsville Ship Channel area, and within the lower Laguna Madre. Two coastal samples collected from the Surfside beachfront and Brazos River locks and one sample from the Dow Barge Canal indicate that *Karenia brevis* concentrations are 'high' (9/22; TPWD). Four samples collected from locations in Corpus Christi Bay and the Aransas Pass region indicate that *K. brevis* is not present, although TAMU's Imaging Flow CytoBot found 'very low' concentrations in samples collected from its location in the Port Aransas ship channel (9/21; TPWD). One coastal sample collected from the University of Texas Pan American Coastal Studies Lab, along the southern end of South Padre Island, indicates that *K. brevis* concentrations remain between 'low a' and 'low b' alongshore (9/22; TPWD). Two samples collected from the Brazos-Santiago Pass region indicate that *K. brevis* remains at 'low a' concentrations (9/22; TPWD). A 'low a' concentration of *K. brevis* was identified in a sample collected from South Bay near Brazos Island (9/22; TPWD). One sample collected from the Brownsville Ship Channel at the Y indicated a 'low a' concentration of *K. brevis*. Another sample located further west within the Brownsville Ship Channel indicated that *K. brevis* concentrations may have decreased to 'medium', since last week when a 'high' concentration was identified in that location. Respiratory irritation and dead fish were reported from San Luis Pass to the gulf side of the Brazos River (9/22; TPWD), and patchy low respiratory impacts are possible through Sunday due to predominantly offshore winds. Onshore winds through Sunday will increase the potential for impacts in the South Padre Island area of southern Texas.

Recent MODIS imagery (9/22, shown left) is partially obscured by clouds along the Texas coast from Bolivar Roads Pass to the Sabine Pass area and from the southern end of South Padre Island to the Rio Grande area. A band of elevated to high chlorophyll (2-19 $\mu$g/L) is visible along- and offshore of the coast from San Luis Pass to Brazos River, where the harmful algal bloom has been identified, and also north to the Sabine Pass area. Elevated chlorophyll (2 to <10 $\mu$g/L) is also visible stretching along- and offshore of the Texas coast from the Brazos River region to South Padre Island with patches of high to very high chlorophyll (10 to >20 $\mu$g/L) alongshore from the Brazos River to East Matagorda Bay regions.

Forecast models indicate a maximum bloom transport of 60 km north from coastal sample locations in the Freeport area from September 22 to 26 and between <10 to 35 km south along the coast from coastal sample locations in the Brazos Santiago Pass area from September 17 to 25. Forecast models also indicate a maximum transport of 15 km south along the coast from Port Aransas from September 20 to 25.

**This is a supplemental bulletin. The next regular bulletin will be issued Monday, September 26**

Kavanaugh, Derner

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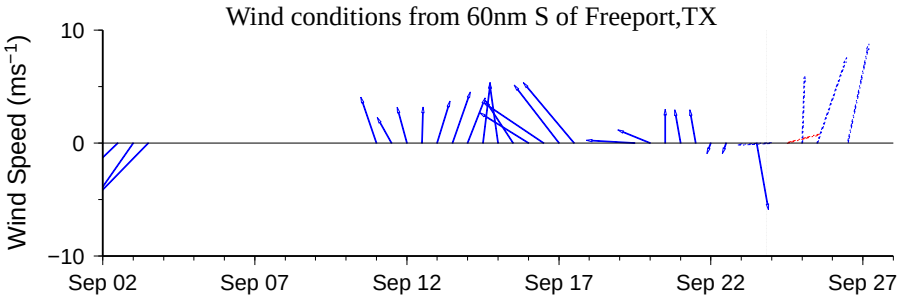
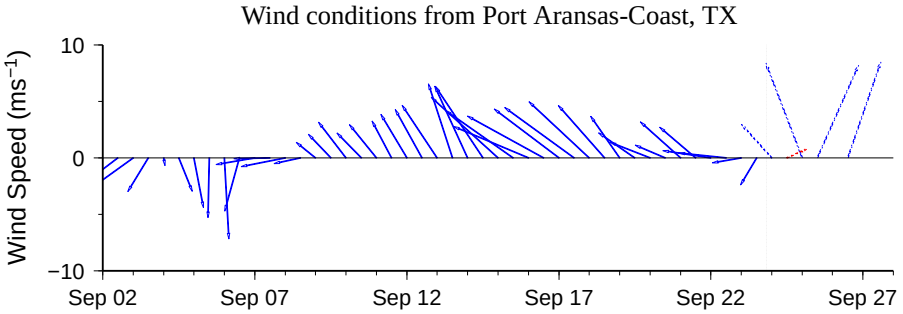
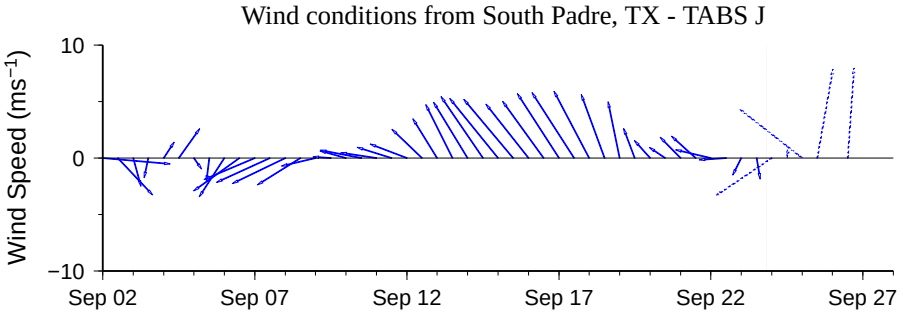



Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).



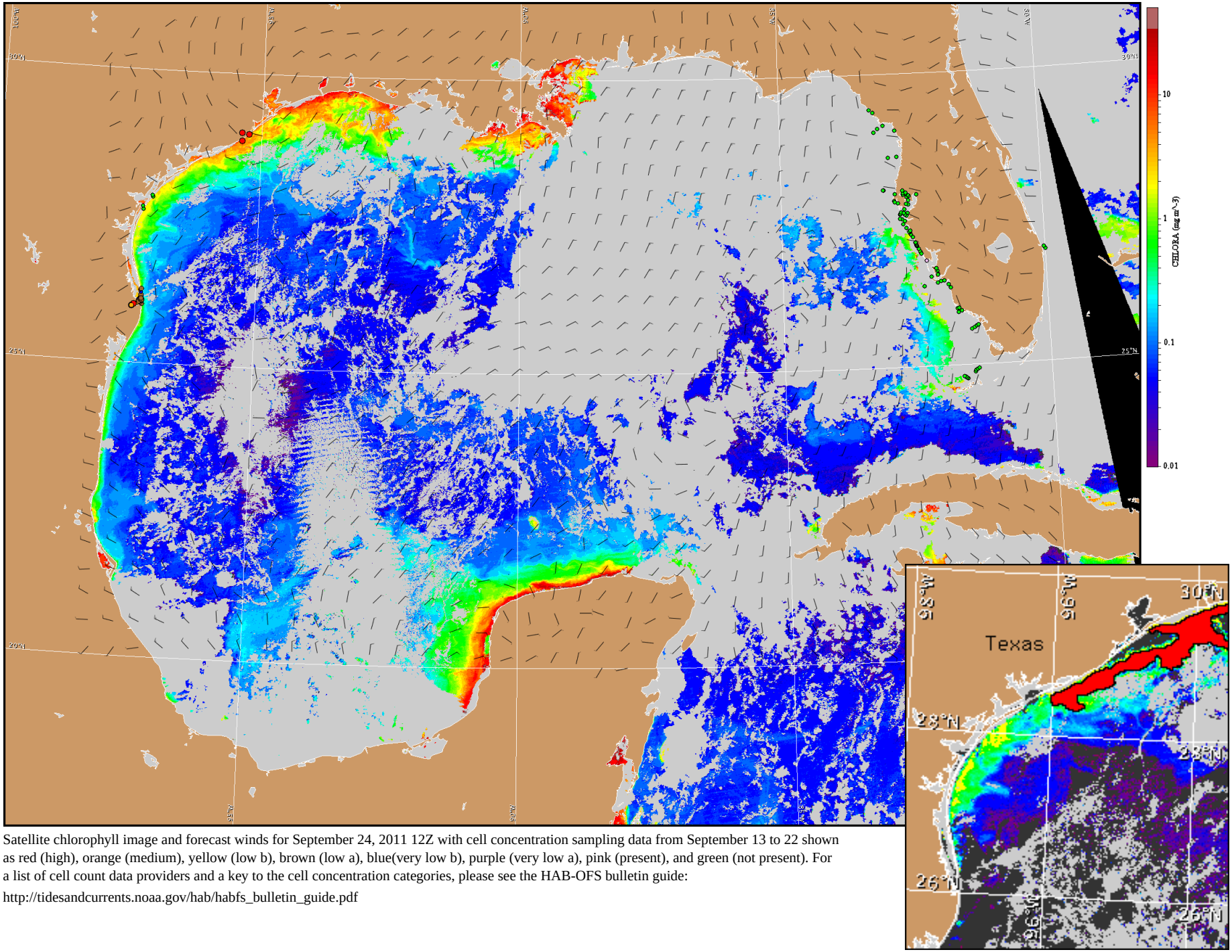



# Wind Analysis

**Galveston and Freeport area**: Northeast winds (10-15 kn, 5-8 m/s) today becoming southeast winds (10 kn, 5 m/s) this afternoon. South-southwest winds (5-15 kn, 3-8 m/s) this evening. West-southwest winds (5-15 kn) Saturday. South winds (10-20 kn) Saturday evening through Sunday.

**South Padre**: Northeast winds (15 kn, 8 m/s) today. Tonight, east winds (15 kn) becoming south winds after midnight. North winds (10 kn) becoming east-southeast winds Saturday. South winds (15 kn) Sunday.

**Port Aransas**: Northeast winds (5-10 kn, 3-5 m/s) today. North-northeast winds (5-10 kn) Saturday becoming southeast-south winds (5-15 kn) Saturday evening through Sunday.




Satellite chlorophyll image and forecast winds for September 24, 2011 12Z with cell concentration sampling data from September 13 to 22 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:
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Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).